

CLAIMS

What is claimed is:

1. A method of manufacturing a roofing shingle comprising the steps of:
 - coating a continuously supplied shingle mat with roofing asphalt to make an asphalt coated sheet;
 - applying a first portion of granules onto the asphalt coated sheet, wherein the first portion contains substantially no anti-microorganism granules;
 - applying a second portion of granules over the first portion of granules, wherein the second portion of granules comprises granules and anti-microorganism granules; and
 - removing the granules and anti-microorganism granules which are not adhered to the asphalt coated sheet.
2. The method according to Claim 1, wherein the step of applying a first portion of granules includes the step of controlling the amount of the first portion of granules applied to the asphalt coated sheet so that the first portion of granules constitutes a first predetermined percentage of the total volume of all granules in the first and second portions of granules which ultimately adhere to the asphalt coated sheet.
3. The method according to Claim 2, wherein the first predetermined percentage is within the range of from about 20 percent to about 50 percent of the total volume of all granules which ultimately adhere to the asphalt coated sheet.

4. The method according to Claim 1, wherein the step of applying a second portion of granules includes the step of controlling the amount of anti-microorganism granules in the second portion of granules so that the anti-microorganism granules constitute a second predetermined percentage of the total volume of all granules in the second portion of granules which ultimately adhere to the asphalt coated sheet.

5. The method according to Claim 4, wherein the second predetermined percentage is within the range of from about 6 percent to about 12 percent of the total volume of all granules in the second portion of granules which ultimately adhere to the asphalt coated sheet.

6. The method according to Claim 1, wherein the anti-microorganism granules include copper granules.

7. The method according to Claim 1, wherein the first portion of granules comprises background granules.

8. The method according to Claim 1, wherein the step of applying a first portion of granules includes applying the first portion of granules such that the roofing asphalt envelops a predetermined percentage of the first portion of granules.

9. The method according to Claim 8, wherein the predetermined percentage of the first portion of granules is within the range of from about 70 percent to about 80 percent.

10. The method according to Claim 1, wherein the step of applying a second portion of granules includes applying the second portion of granules such that the roofing asphalt envelops a predetermined percentage of the anti-microorganism granules.

11. The method according to Claim 10, wherein the predetermined percentage of the anti-microorganism granules is within the range of from about 0.0 percent to about 5.0 percent.

12. The method according to Claim 1, further including the step of applying a third portion of granules over the second portion of granules.

13. The method according to Claim 11, wherein the third portion of granules comprises background granules.

14. The method according to Claim 1, wherein the anti-microorganism granules have a diameter within the range of from about 1.2 mm to about 1.7 mm.

15. A roofing shingle manufactured in accordance with the method of Claim 1.

16. A roofing shingle comprising:
an asphalt coated sheet;
a first portion of granules adhered to the asphalt coated sheet, wherein the first portion contains substantially no anti-microorganism granules;
a second portion of granules adhered to the asphalt coated sheet, wherein the second portion of granules comprises granules and anti-microorganism granules, and wherein the asphalt of the asphalt coated sheet envelops a predetermined percentage of the anti-microorganism granules.

17. The roofing shingle according to Claim 16, wherein the predetermined percentage of the anti-microorganism granules enveloped by the asphalt of the asphalt coated sheet is within the range of from about 0.0 percent to about 5.0 percent.

18. The roofing shingle according to Claim 16, wherein the step of applying a first portion of granules includes applying the first portion of granules such that the roofing asphalt envelops within the range of from about 70 percent to about 80 percent of the first portion of granules.

19. A method of manufacturing a roofing shingle comprising the steps of:

coating a continuously supplied shingle mat with roofing asphalt to make an asphalt coated sheet; and

applying a portion of granules onto the asphalt coated sheet, wherein the portion of granules comprises roofing granules and anti-microorganism granules, and wherein the anti-microorganism granules have a diameter within the range of from about 1.2 mm to about 1.7 mm.

20. The method according to Claim 19, wherein the step of applying a portion of granules includes the step of controlling the amount of anti-microorganism granules so that the anti-microorganism granules constitute within the range of from about 6 percent to about 12 percent of the total volume of all granules in the portion of granules which ultimately adhere to the asphalt coated sheet.

21. The method according to Claim 19, wherein the anti-microorganism granules include copper granules.

22. The method according to Claim 19, wherein the step of applying a portion of granules includes applying the portion of granules such that the roofing asphalt envelops within the range of from about 0.0 percent to about 5.0 percent of the anti-microorganism granules.

23. A roofing shingle manufactured in accordance with the method of Claim 19.